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## The Making of Rushlights

(We are indebted to Mr. Albert E. Lownes for furnishing the following. Mr. Lownes says "Most writers on early American illumination give the rush-light only passing mention. I do not know of any account of their manufacture in this country. Consequently, I trust that this rather detailed and circumstantial record from Gilbert White's classic *Natural History of Selborne* will prove of interest. It occurs in White's letter to the Honourable Daines Barrington dated November 1, 1775, and, while it records English usage, there is little reason to believe that the American manufacture differed in any essential particular.")

I shall make no apology for troubling you with the detail of a very simple piece of domestic economy, being satisfied that you think nothing beneath your attention that tends to utility: the matter alluded to is the use of *rushes* instead of candles, which I am well aware prevails in many districts besides this; but as I know there are countries also where it does not obtain, and as I have considered the subject with some degree of exactness, I shall proceed in my humble story and leave you to judge the expediency.

The proper species of *rush* for this purpose seems to be the *juncus effusus*, or common soft rush, which is to be found in most moist pastures, by the sides of streams, and under hedges. (*Juncus effusus* L. is a very common cosmopolitan species, found throughout the north temperate zone, and almost every boggy spot supplies a quantity. To the homesick colonists, it must have been a very pleasant reminder of their old home.—*A. E. L.*) These rushes are in best condition in the height of summer; but may be gathered, so as to serve the purpose well, quite on to autumn. It would be needless to add that the largest and longest are best. Decayed labourers, women, and children, make it their business to procure and prepare them. As soon as they are cut they must be flung into water, and kept there; for otherwise they will dry and shrink, and the peel will not run. At first a person would find it no easy matter to divest a rush

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## Technical Americana

By PENROSE R. HOOPES

The early literature pertaining to the practical aspects of American industry is a fascinating field of study for the collector of tools and implements. It constitutes almost the only reliable source of information which we have, on the nature and uses of the various appliances and the techniques of the trades. Of perhaps even greater importance, however, is the insight which contemporary publications give into the social and economic functions of the manual workers and their occupations as vital forces in the evolution of American society.

In the absence of an informed appreciation of the technical growth of the trades, as that growth finds expression in the physical appliances employed by the workmen, and a knowledge of the social implications of each occupation, the mere gathering together of the relics of the early shops and farms would be but a form of pointless romanticism. Fortunately, collectors of trade implements are in small dan-

(*Continued on page 6, column 1*)

### Our Purpose

The purpose of the association is to encourage the study and better understanding of early American industry, in the home, in the shop, on the farm, and on the sea, and especially to discover, identify, classify, preserve and exhibit obsolete tools, implements, utensils, instruments, vehicles, appliances and mechanical devices used by American craftsmen, farmers, housewives, mariners, professional men and other workers.

### Dues

The annual dues are one dollar, payable September first, for the year immediately ensuing. *The Chronicle* for the current year is sent to all members without additional charge. Back numbers (except No. 1) may be secured from the Treasurer for 20c each. For further information, address any of the officers. See page 5.

## Whale Oil Burners

### *Part III. Special Forms*

By EDWARD A. RUSHFORD

Many improvements were made in the ordinary solid or whale oil burner, some of which were patented. Examples of these special whale oil burners are not easy to find today. Burners were easily lost, and hundreds of others were thrown away by thoughtless electricians, when electrifying lamps for careless customers.

Some of these specially constructed burners, which, by the way, were generally made of pewter, present an arrangement for supporting a chimney. The burner plate is much larger than that of the ordinary burner, and, as a rule, decidedly concave. Two or three projections, placed at the edge of the plate, extend above its surface. One of these is pierced, and holds a small thumb screw; the others may be notched, or made with a small pointed extension projecting from the inner surface. The bottom edge of the chimney was slipped into the notch or under the point, and the thumb-screw tightened sufficiently to hold the chimney securely. Some arrangement is usually provided to permit a current of air to pass through the chimney, and may consist of a series of circular openings encircling the plate, or several slots placed at regular intervals around it.

Other burners are constructed with wick raisers, so that the necessity of keeping a wick pick constantly at hand was removed. These burners were made with a compartment above the thread. Inside this compartment is a cylinder with a number of short projections or pins. With the majority of these burners, the pins are arranged in four rows about the cylinder, and number from twenty to twenty-eight. The wick tubes, as they pass through the compartment, are cut away on the side facing the raiser, the pins of which project into the lumen of the tubes. When the small knob, which is

attached to the cylinder and projects outside the burner, is turned, the pins, encroaching on the wick, become entangled in its meshes and raise it.

If one cares to make a study of the patent office records, he will find several patents which were granted for improvements on solid burners, and also learn with regret that very little information is to be obtained about those patents which were granted before 1835. It is interesting to note that many of these early patents have a more or less direct connection with some one of the famous Massachusetts glass works, especially the New England Glass Company. The earliest patent relating to burners, noted so far, was granted on February 2, 1822, to Deming Jarves, then a resident of Cambridge, Mass. It was for a "Tube for glass lamps." In 1829, Mr. Jarves was granted another patent, this being listed as an "Improvement in the mode of affixing glass chimneys to various kinds of argand lamps, and to the cork tops used with glass lamps." The title of this patent indicates that the cork disc burner was in use at a much later date than is generally supposed. Mr. Jarves' name appears in the patent records again, in relation to burners, in 1844. A patent for a lamp cap was granted to "R. H. Eddy, of Boston, Mass., Assignor to D. Jarves and New England Glass Company." No reliable information is at present available in regard to the Jarves patents. The Eddy patent was an improvement on one granted to Joseph Benson a few months before, and the construction of the burner was supposed to prevent excess oil from flowing down over the side of the lamp, to prevent oil escaping from the reservoir through the screw of the lamp cap, and to catch any carbon which might fall from the inflammable portion of the wick. Francis Draper, of East Cambridge, Mass., received a patent, on January 17, 1842, for "Construction of the caps for glass lamps." The Draper burner was constructed to enclose the neck of the lamp entirely, and extend slightly into the reservoir. Its object was to prevent the oil from coming into contact with the cement which held the burner in place, and destroying its adhesive qualities. On March 20, 1844, another patent was issued to Mr. Draper for a "Lamp cap." This burner was constructed with a "cup" around the tubes to catch any excess oil and prevent it flowing down over the outside of the lamp.

Flat wicks, though usually associated with lamps burning lard or lard oil, were also used with whale oil. Much could be written about the inventions of Samuel Rust, of New York City, as at least eleven lamp patents were issued to this gentleman between 1835 and 1846. The majority of these devices were for burning whale oil. In the greater part of the patent drawings, the burners are depicted as serving in glass lamps. In all but a few instances, flat wicks were used, the remainder being round or, in some instances, square. The majority of Mr. Rust's patents are listed simply as "Lamps", though we do find such other titles as "Wick tube", "Wick raiser", "Lamp burner" and "Lamp wick". Perhaps the most interesting of the flat wick patents intended for the burning of whale oil in glass lamps, is the one granted to John W. Schulz and Joel Trull, both of Medford, Mass., on March 9, 1831. These burners are extremely rare and may be identified by the marking SCHULZ & TRULL'S PATENT on the outer edge of the wide, flat plate. This burner is constructed with three small, flat tubes to hold three-eighths inch wicks. A cone, placed about the opening in the center of the plate, caused the wicks to converge in the form of a circle. As the plate was provided with a chimney holder, air was admitted through three slots cut under the plate, connected with pointed openings in the base of the cone.

It is probable that, if the owners of old lamps will take the time to examine them, many interesting burners may be brought to light, and value added to the lamps possessing them.

LAMP BURNERS

*Top row*, drop burners (see Chronicle Nos. 3 and 4). *Second row*, threaded whale oil burners (see Chronicle No. 6). *Bottom row*, special forms (see accompanying article) left to right, burner with chimney holder, burner with wick raiser, Schulz & Trull's patent.

## Farm Implements of 1824

(*Continued from last issue*)

. . . "(In pruning apple trees) after sawing off the branch, let the bark and edges of the stump be pared close and smooth with a sharp knife (a drawing knife will be found convenient)[193] . . . Moss and scaly bark can be readily removed by rubbing the trees in damp weather with a hoe, or the back of a knife[198] . . . (In picking) instead of ladders, stepping frames should be employed, and a pole, furnished with a hook at the end, and covered with coarse cloth, may be used to shake the smaller limbs, without injuring the bark[202] . . . For budding, provide a sharp budding-knife, with a flat, thin haft, of ivory, suitable to open the bark of the stock for the admission of the bud[204] . . . The most important instrument in the farmer's garden, is the plough. The spade is the next instrument. This may be thin and sharp, and if used only in the garden, will last many years. The hoe is an indispensible tool, and of this you must have three varieties: the large, the small, and narrow hoe, all of which should be sharp, and kept exclusively for the garden. Two iron rakes, a coarse and fine one, will often be wanted; and a strong line of at least 40 feet in length. A rake can be made in about 30 minutes, which will mark out more ground for the gardener to seed than four men could perform in the common way in equal length of time. The head of the rake is to be about 6 feet long; into this, bore holes with an inch auger, at such distances as you wish to have the seed sown; put in teeth, sharpened at their lower ends; and attach a handle 5 or 6 feet long. The head of the rake should be sufficiently heavy, and the handle and teeth should be at right angles. Begin at the left-hand end of the bed and draw the rake across it; then proceed, taking care to keep the left-hand tooth in the right-hand drill that has just been made (for a guide). In this way, a pretty long bed is formed into straight drills in a very few minutes. With these few and simple tools, all the work of a garden may be done, and well done; and if to these you add the wheelbarrow, you have everything necessary[216, 217] . . . The hoeing, when the plants are become stout, should be deep: and if done with a hoe that has *prongs* the better[221] . . . CURRANT WINE. — To make this wine, gather the currants when fully ripe, let them be picked in fair weather and with as much expedition as possible; break them well into a tub or vat (some have a mill constructed for the purpose, consisting of a hopper, fixed upon two lignum vitae rollers)[239] . . . A small hand plough might be very advantageously used for the purpose of eradicating weeds among several kinds of growing crops of roots: such as onions, carrots, parsnips, etc. It should have two light handles, leaning well backward, of the length of, say four and a half feet, or of such length as will be found most proper for the purpose of *pushing* the plough forward by hand. It should have a beam and share, of such dimensions, that the plough would cut a furrow of, say an inch in depth, and about four inches wide. The share should be shaped similar to that of a large plough, and it should be kept well ground, so as to cut off all the roots of weeds which come in its way.[261]"

## Rushlight Making

(*Continued from page* 1, *column* 1)

of its peel or rind so as to leave one regular, narrow, even rib from top to bottom that may support the pith: but this, like other feats, soon becomes familiar even to children; and we have seen an old woman, stone-blind, performing this business with great dispatch, and seldom failing to strip them with the nicest regularity. When these *junci* are thus far prepared, they must lie out on the grass to be bleached, and take the dew for some nights, and afterwards be dried in the sun.

Some address is required in dipping these rushes in the scalding fat or grease; but this knack also is to be attained by practice. The careful wife of an industrious *Hampshire* labourer obtains all her fat for nothing; for she saves the scummings of her bacon-pot for this use; and, if the grease abounds with salt, she causes the salt to precipitate to the bottom, by setting the scummings in a warm oven. Where hogs are not much in use, and especially by the sea-side, the coarser animal-oils will come very cheap. A pound of common grease may be procured for four pence; and about six pounds of grease will dip a pound of rushes; and one pound of rushes may be bought for one shilling: so that a pound of rushes, medicated and ready for use, will cost three shillings. If men that keep bees will mix a little wax with the grease, it will give a consistency, and render it more cleanly, and make the rushes burn longer: mutton suet would have the same effect.

A good rush, which measured in length two feet four inches and a half, being minuted, burned only three minutes short of an hour: and a rush of still greater length has been known to burn one hour and a quarter. (Rivington's Book of English Trades (1827) states, on page 324, that a rush-light, twelve inches long, will burn from ten minutes to a quarter of an hour.—*Ed.*)

These rushes give a good clear light. Watch-lights (coated with tallow), it is true shed a dismal one, "darkness visible"; but then the wicks of those have *two* ribs of the rind, or peel, to support the pith, while the wick of a dipped rush has but *one*. The *two* ribs are intended to impede the progress of the flame and make the candle last.

In a pound of dry rushes, avoirdupois, which I caused to be weighed and numbered, we found upwards of one thousand six hundred individuals. Now suppose each of these burns, one with another, only half an hour, then a poor man will purchase eight hundred hours of light, a time exceeding thirty-three entire days, for three shillings. According to this account each rush, before dipping, costs 1/33 of a farthing, and 1/11 afterwards. Thus a poor family will enjoy 5½ hours of comfortable light for a farthing. An experienced old housekeeper assures me that one pound and a half of rushes completely supplies his family the year round, since working people burn no candle in the long days, because they rise and go to bed by daylight.

Little farmers use rushes much in the short days, both morning and evening, in the dairy and kitchen; but the very poor, who are always the worst economists, and therefore must continue very poor, buy an half penny candle every evening, which, in their blowing open rooms, does not burn much more than two hours. Thus have they only two hours light for their money instead of eleven.

Mackenzie's Five Thousand Receipts (1830) recommends that, if you have difficulty in re-setting a dislocated joint of another person, you "make the patient drink strong hot toddy of brandy or other spirits, until he is very drunk. In this way, owing to the relaxed state of the muscles, a very slight force will often be sufficient, where a very great one has been previously used without effect. If any objections are made to this proceeding, or if the patient will not consent to it . . . make him stand up, and bleed him in that position until he faints."

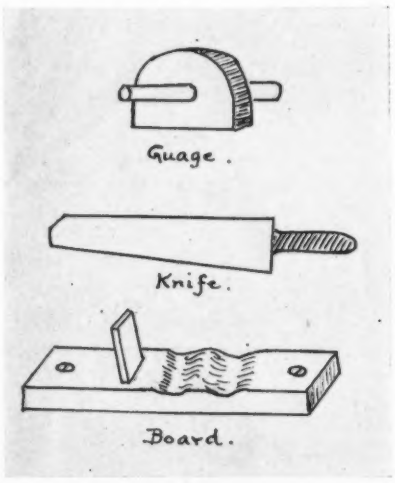
## The Cork Cutter

By William B. Sprague

Cork-cutting, according to Rivington (1827), was "one of the blackest and dirtiest of trades, and not very profitable either for the master or the journeyman." The early books do not go into great detail as to the exact methods used, except to say that the peculiarly constructed and "exceedingly

CORK CUTTING
from Rivington's "Trades"

sharp" knife is almost the only instrument used. However, Rivington's picture, reproduced herewith, assuming it to be accurate, gives a fair idea of how the work was done, and it is interesting to learn from the text that the objects hanging from the ceiling are cork life-preservers, "costing a few shillings," which were turned out by this artisan, in addition to bottle stoppers and barrel bungs. The mid-19th century writers are more specific, although not altogether in agreement, as to the proper method of cutting. The cork was delivered to the cutters in large square pieces and, if not sufficiently flat, the convex side was exposed to a fire in the "burning yard," the heat tending to twist the edges of the bark and counteracting the natural bend. "During this operation, attention was paid to smoothing it and covering the defects." It was next cut into strips, by means of a guage, similar to that shown in the sketch, set narrow or wide, according to whether the finished article was to be a *cork*, *bung*, or *tap*, as the different sizes were called. These strips were then cut into squares according to the required length, whether *short*, *long*, or *full long*. This rough cutting was done by one workman who divided up the pieces among several others for finishing. The knife used for the latter purpose had a blade about six inches long, quite broad, very thin and very sharp. It is illustrated in the accompanying sketch and also in Edward H. Knight's American Mechanical Dictionary, page 623. The cutter either sat alone before a bench, or with three others at a square table which had a raised rim, to prevent the corks from rolling off. Apparently, there were two distinct methods employed for rounding the cork. According to Tomlinson, the cutter was supplied with "a board" (see sketch) about twelve inches long, four inches broad, and three inches thick, the upright piece rising about four inches above the surface. The roughly squared piece of cork was held against this upright, to steady it, and, with a "quick twist of the wrist," a portion was cut away, leaving a rounded surface. The piece was then turned to the point where the first cut ended, and this was repeated until the rounding was complete. The knife was whetted on the board, after every cut, by one stroke on each side of the blade, thus accounting for the two rough depressions in the surface of the board. On the other hand, Ure says that "the workman ought not to draw his knife edge over the cork, for he would thus make misses, and might cut himself, but rather the cork over the knife edge. He should seize the knife with his left




CORK-CUTTING TOOLS
from Tomlinson's Cyclopedia

CORK CUTTING
from Tomlinson's Cyclopedia

hand, rest the back of it upon the edge of the table, into one of the notches made to prevent it from slipping, and merely turn its edge, sometimes upright and sometimes to one side. Then holding the squared piece of cork by its two ends, between his finger and his thumb, he presents it in the direction of its length to the edge; the cork is now smoothly cut into a rounded form by being dexterously turned in the hand." Both authorities agree that the knife was occasionally sharpened with an ordinary whetstone, and that after being rounded, the two ends of the corks were squared off and the pieces thrown into a basket to be sorted into uniform sizes.

Sources of Information: *Book of English Trades*, C. & J. Rivington, London, 1827; *Cyclopedia of Useful Arts*, by Chas. Tomlinson, pub. Geo. Virtue, London, 1852; *Dictionary of Arts, Manufactures and Mines*, by Andrew Ure, Appleton, New York, 1850.

In the eighteenth century, moles were destroyed by a professional, employed by several towns together, for a term of seven years, at the rate of four pence per acre. Says an early writer, "This agreement, toward a total extirpation, must be more efficacious, than the greatest exertions of individuals." Several farmers would contribute at the rate of six pence per plough, to a fund for pulling down the nests of crows which had built in their neighborhood. The keeping of a hedge-hog would free a kitchen from beetles, rats and mice, — not that he would eat them, but they were supposed not to be able to endure his smell.

# Early American Industries Association


**Early American Industries Association**

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## Editorial

It seems to us that *The Chronicle* can render no more valuable service to its subscribers, and, if you will, to posterity, than the perpetuation and dissemination of information contained in early books, which might otherwise be lost. Many such books are of standard character and may be found in any of the larger libraries. With these we are not at the moment concerned, but with the unimportant, obscure book, of which the original edition was comparatively small, and of which the few copies in existence today, being in the hands of individuals rather than on the shelves of institutions, may some day be thrown away by unappreciative persons, as having no monetary value. *The Chronicle* is being carefully filed, with the ultimate object of binding it into permanent volumes, at several of the leading libraries and museums of the country, and, with proper indexing, should be a ready source of reference in its field, for all time to come. If, therefore, you have any little-known book, pamphlet, etc., which deals wholly or partially with early American industry of any kind, we urge that you copy from it the more important portions, or lend it to us that we may do so, in order that they may be printed in *The Chronicle*, for the benefit both of our present members and of students of these subjects in the remote future. We realize that, from the standpoint of the casual reader, such excerpts may not prove as interesting as original articles written by our members, and we have no intention of subordinating the latter to the former; yet we must all recognize the fact that contemporaneous literature, generally speaking, is more reliable and authoritative than writings based on research, however painstaking.

## Annual Meeting

The annual meeting of the Association was held, as announced, at the Northampton Hotel on September 1st. About forty persons, members either of the Association, or of the Rushlight Club, or both, many of whom were accompanied by their wives, gathered at the hotel on the day before, in time for dinner, in a room which was set aside for their exclusive use, and spent a most enjoyable evening together. Dr. Rushford entertained with an interesting and instructive talk on early lamps, illustrated with pictures projected by his discograph, a convenient, inexpensive and most efficient substitute for the familiar stereopticon. At the business session on Saturday morning, with an attendance of sixty-eight, after certain routine matters had been disposed of, such as the permanent adoption of the rules which had been enacted by the executive committee, and the reception of the reports of the treasurer and of the various committees, the members passed a vote of thanks to the officers and committeemen for their services during the past year, as well as to Messrs. Wells and Wiggins for special assistance rendered to the Association, and adopted a resolution, recording their sense of loss at the untimely death of Stephen C. Wolcott, and extending sympathy to Mrs. Wolcott. The following officers were thereupon unanimously elected: William B. Sprague, President and Chairman of the Publications Committee; Earle T. Goodnow, Secretary and Treasurer; S. Edson Gage, Chairman of the Admissions Committee, and Albert E. Lownes, Chairman of the Recruiting Committee. Mr. Lownes announced the appointment, as members of his committee, of Messrs. Byard, Whitlock, Bolton, Rushford, Wiggins and Ormsbee, and expressed the belief that, through the efforts of these competent gentlemen, the membership would rapidly increase. The sense of the meeting was that a year's experience has shown that dealers make useful and otherwise desirable members, and that there should be no hesitation in inviting them to join. It also appeared to be the unanimous sentiment that, under no circumstances, should The Chronicle be incorporated in any other magazine, and that every effort should be made to issue it at least bimonthly. It was suggested that some additional revenue might be secured by arranging loan exhibitions of early industrial material, to which admission would be charged, and Mrs. Watkins was appointed chairman of a committee to consider the feasibility of such a plan, with power to select the other members of her committee. The time and place of the next annual meeting was left to the discretion of the executive committee.

## Will You Help?

The Association closed its first year with almost three hundred members,—an amazing achievement for a new organization at a time when many established associations are struggling to survive. In one year it has become the acknowledged source of authoritative information on early American life and industry. Gratifying as these facts are, we must face one other. If the Association is to continue the work it has begun so well, it must have more members. By next September, our roll should number not less than one thousand. That goal will be easy to reach if each member of the Association will enroll three other interested persons. Libraries, museums and historical societies, as well as the host of individual collectors and antiquarians offer fertile ground. The field has barely been scratched. It needs intensive cultivation. Membership in the Association or a subscription to The Chronicle are gifts that will be appreciated throughout the year. Do your Christmas shopping early!

The undersigned committee has been appointed to help enroll new members. Please send the name and address of any person who you believe will be interested to the Chairman, if you do not care to approach him yourself.

Pelham Bolton — John K. Byard
Thomas H. Ormsbee — E. A. Rushford
C. E. H. Whitlock — Lewis N. Wiggins
Albert E. Lownes, *Chairman*

# The Chronicle

## Technical Americana

(*Continued from page 1, column 2*)

ger of neglecting the social background of their collections, for the objects themselves, being devoid of any conceivable artistic merit, take on significance only as they fall into their proper places in the mosaic of technical history. It is for this reason, and because the history of technology is still largely buried in original sources, that the collector of tools so often becomes a collector of early books about tools.

Oddly enough, in view of the enormous amount of bibliographical research which has occupied American scholars for the past fifty years, relatively little systematic attention has been paid to the literature of the applied arts. There are, of course, a number of specialized bibliographies covering limited sectors of the field, and the monumental works of Evans and Sabin are invaluable, but much that is of the greatest importance remains unrecorded. The serious collector of technical Americana is, therefore, in the difficult position of having no comprehensive guide to either the European works which exerted an undoubted influence upon the technical heritage of the American artisans, or to the strictly American books which reflect directly the contemporary interests of our native tradesmen.

It is significant, for an understanding of 18th century American technology, that David Rittenhouse was acquainted with Stone's translation of Bion's "Construction of Mathematical Instruments," that Isaac Doolittle of New Haven (who built the printing press on which the Declaration of Independence was first printed) owned a copy of Smith's "Laboratory, or School of Arts" and made constant use of it, and that, as early as 1765, John Wily's book on wool and flax was published in Williamsburg, Va., "with directions for making several utensils for the business." These books are of special interest to Americans, in view of the fact that we know, beyond question, that they were part of the background of the 18th century American workmen. It by no means follows, however, that the early European literature on the trades can be neglected, merely because we have as yet no proof that copies of the books themselves were actually in America. Dr. Mercer has called attention to the largely universal character of our American tools and implements and to the remarkable persistence of their basic forms from Roman times down to the present day. It is due to this fact that any serious study of the American trades must find its roots in European sources, and must take account of the English, German, French and Italian classics in the field of the applied arts. Such are the works of Scappi (1570) on kitchen utensils, Villafane (1572) on lapidaries' tools, Jousse (1627) on lockmaking, Bossi (1625) on gunsmithing, Biringuccio (1540) on wire drawing, and the books of trades by Schopper (1573) and Garzoni (1616).

It is only in the light of such early records that the later and regrettably meager American literature of the 18th and early 19th centuries falls into its proper perspective. Much of this American material was originally published for the edification of young people or the general public, and consequently presents an oversimplified picture of the status of the arts of its day. The well known "Book of Trades" printed by Dickinson in 1807, and Taylor's "Scenes of Wealth," published in Hartford in 1826, are examples. Of somewhat more substantial value are such works as the anonymous "Valuable Secrets concerning Arts and Trades" (Norwich, 1795) and "One Thousand Valuable Secrets" (Philadelphia, 1795), both of which were American reprints of English handbooks of the period. Finally, there are the original works by American authors, of which Jared Eliot's rare tract on the art of making iron (New York, 1762), Oliver Evans' "Young Mill-Wright and Miller's Guide" (Philadelphia, 1795) and S. W. Johnson's "Rural Economy" (New Brunswick, 1806) are typical.

Here, surely, is a rich mine for the collector and student who wishes to enlarge our insight into the ways of our forefathers. Perhaps, by the cooperative efforts of the members of this Association, we may some day reach a comprehensive knowledge of the early literature of the useful arts. Only upon the basis of that knowledge can the history of American industry be written and the significance of the collector's treasures as social documents be made clear.

In looking over the records of the early settlers of Virginia, we find the following tradesmen listed in the Jamestown Settlement of 1607: tailor, carpenter, goldsmith, refiner, blacksmith, gunsmith, cooper, bricklayer, mason, tobacco pipe maker. In 1612 came also the tanner, shoemaker, shipwright, and brickmaker.

## Absorbent Cotton

By "G. A. R. Goyle"

Purified raw cotton for surgical use had been introduced in 1872 by the German physician Carl Ehrle, and it rapidly superseded the lint or "charpie" used till then, for dressing wounds. Lint was the ravelled or scraped linen, reduced to a soft state and used for dressing wounds or ulcers. In continental Europe, the French word "charpie" was used to denote lint. As formerly prepared, lint consisted of scrapings from the surface of old linen cloth, which was drawn beneath a knife, the weft-threads being pushed back from time to time, and the scrapings being obtained from the threads of the warp. Lint made up into a flat, oval form was termed a "pledget,"— into a cylindrical form, or resembling a date-stone, it was called a "dossil." The first attempts for an antiseptic product was a mass of carded or scribbled fiber impregnated with vegetable tar. Reverend Manasseh Cutler presented to the American Academy of Arts, which met on May 29th, 1781, at the Court House in Boston, Mass., a sample of sheet lint, from Dr. Spofford, who had contrived a machine for scraping it with great dexterity. In 1794, the mechanical production of cotton-wool was invented by Thomas Connop; English patent No. 2029 of 12th January, 1795.

## The Rushlight Club

On July 14th, the club paid a visit to the wonderful "castle by the sea" of Mr. John Hays Hammond, Jr., at Gloucester, Mass., and were afforded an opportunity to admire the beautiful antiquities with which it is furnished, including many lighting devices, dating as far back as the 15th century, and gathered from all parts of Europe. On August 11th, Mr. and Mrs. Stephen Van Renssalaer entertained the club at Peterborough, Mass., at their home in the old Wilson Tavern, built in 1797. Mr. Van Renssalaer possesses one of the finest known collections of American chandeliers, lanterns, lamps, candle-holders, and other lighting devices, and after a thorough examination of these treasures, a delicious luncheon was enjoyed. Anyone interested in joining the Rushlight Club should communicate with Mrs. Edward Ingraham, 7 Lowell Street, Cambridge, Mass.

# Early American Industries Association

## New Members

Please check your name and address and advise Mr. Goodnow of any corrections. The total membership is now 296.

Earle E. Andrews, *Winchester, Mass.*
Mrs. Gillian W. B. Bailey, *New York, N. Y.*
Lee B. Baker, *Wolpole, N. H.*
Robert F. Cate, *Louisville Ky.*
Julius Daniels, *Boston, Mass.*
Ernest Griffin, *Tarrytown, N. Y.*
Mrs. Ernest Griffin, *Tarrytown, N. Y.*
Miss Sarah Heaney, *Northampton, Mass.*
John W. Higgins, *Worcester, Mass.*
Howard R. Hill, *Staten Island, N. Y.*
Mrs. Bertha Hubbel, *Northampton, Mass.*
George S. Hudson, *Winchester, Mass.*
Mrs. J. Lippert, *Bogota, N. J.*
L. E. Kimball, *Tompkin's Cove, N. Y.*
Mrs. Donald M. Lourien, *Northampton, Mass.*
John Maxon, *White Plains, N. Y.*
Joseph C. Mendes, *Mattapoiset, Mass.*
Mrs. M. T. Nichols, *Medford, Mass.*
Mrs. Charles L. Norton, *Boston, Mass.*
Miss Helen Penrose, *New York, N. Y.*
Mrs. Raymond B. Seymour, *New York, N. Y.*
A. Ralph Steinberg, *Princeton, R. I.*
Frank K. Swain, *Doylestown, Pa.*
L. L. Thwing, *Belmont, Mass.*
Miss Janet Waring, *Yonkers, N. Y.*
Cornelius Weygandt, *No. Sandwich, N. H.*
Capt. W. B. Wyant, *Fort Ethan Allen, Vt.*
M. A. H. York, *Mattapoiset, Mass.*

There is a legend that, during the building of King Solomon's temple, that wise ruler decided to regale the artisans employed on the work with a banquet. While the men were enjoying the good things which his bounty had provided, the King moved about from one table to another in an endeavor to become better acquainted with his workmen. To one he said: "My friend, what is your trade?" "A carpenter." "And who makes your tools?" "The blacksmith," replied the carpenter. To another, Solomon spoke: "What is your trade?" and the reply was: "A mason." "And who makes your tools?" "The blacksmith," replied the mason. A third stated that he was a stone-cutter, and that the blacksmith also made his tools. The fourth man whom the King addressed was the blacksmith himself. He was a powerful man, with bared arms on which the muscles stood out in bold relief, and, seemingly, almost as hard as the metal he worked. "And what is your trade, my good man?" the King asked. "Blacksmith," laconically replied the man of the anvil and sledge. "And who makes *your* tools?" "Make 'em myself," replied the smith. Whereupon King Solomon immediately proclaimed him the King of Mechanics, because he could not only make his own tools, but all other artisans were forced to depend upon him for their tools as well.

## Museum Notes

### *Backdrops for History*

By Albert E. Lownes

The task of the scenic designer in the theatre, according to a useful definition, is to provide a fitting background for a dramatic performance. South County Museum, which was opened in Wickford, R. I., this summer, hopes to do the same thing for history.

It is difficult to understand why historians, who deal in the most dramatic of materials, have so long overlooked the possibility of adopting the theatre's technique. The dramatist has always gone to history for plots and characters, and has gained immeasurably by doing so, but for some reason the historian has felt that he could not return the visit without losing caste.

South County Museum holds that sound history can be blended with good showmanship. The idea is not a new one. Natural history museums have used it for years in their habitat groups.

The museum is a community project. It has been successful in capturing the imagination of persons of widely varied interests, so that farmers and artisans, bankers and business men, lawyers and teachers, mill-hands and mill-owners all play a part in it. Some of its members are outstanding authorities on early American life, others have practical museum experience, while still others bring the detailed knowledge of a trade that comes only from thorough training and long practice. The community has an unusually interesting history, but the pure history has been and is being studied by other organizations, so that the museum will touch it only incidentally. Like the good stage technician, we shall try to provide the background and the atmosphere. We shall not try to write the play nor act in it.

The museum's assets at the moment consist of a lease on a five-acre tract with two stout and picturesque barns, a small but rapidly growing and fairly representative collection of early tools, and a group of enthusiastic men and women. Our debit is the usual one in these times, — lack of money.

Just as soon as the collection of tools of a trade has developed sufficiently to warrant it, we shall find a small "shop" to house that trade. The shop will be moved to our grounds and the collection will be placed in it in charge of a "shop-keeper." He will be encouraged to "run" the shop. He will hang out his own sign if he wishes, and, as he can, he will break in an "apprentice" or two. In due time, perhaps, he will take his apprentice into partnership, and eventually the apprentice may take over the shop as successor to the original "owner." The museum will, of course, keep general oversight of the shops, but the shop-keepers will be given the widest possible latitude to develop their own trades. This plan has its dangers, it is true, but its manifest advantages seem to outweigh them by so great a margin that we feel little fear for the future.

In the first place, a group of exhibits, each embodying the ideas and personality of its owner, should go far toward killing that bane of all museums, — monotony. This in turn should reduce "museum fatigue" to a minimum. It will engage the interest of a large group of volunteer workers. It will give a clearer picture of the conditions under which our predecessors lived and worked and played than any serried ranks of tools and machines could. It is flexible enough to meet the needs of a growing collection and it requires little money to start it.

In using the word "shop," I do not mean to imply that only the merchantile trades will be shown. We hope in time to cover the whole gamut of colonial life and industry. The cooper will have his shop, the miller his grist-mill, the weaver his shed, the housewife her kitchen, the lumberman his saw-mill, the fireman his engine house. The shipmaster's ship will be pulled up at the wharf near the chandler's warehouse, — and so through the long list. Just now we are in the early stage of collecting, and all of the tools are in the barns, but we long for the day when all but the agricultural tools and those of the livestock farmer will be in their separate shops. Then we can show the conditions under which our history was made, and, by projecting the historical figures against our background, the men should appear as men and not as disembodied spirits.

Members of the Early American Industries Association who come to New England will find much to interest them in Rhode Island's South County. Within a twenty-mile radius of South County Museum are many relics of early industry, — the farm on which Oliver Hazard Perry was born, the snuff-mill that marks the birthplace of Gilbert Stuart, the forge that was run by Nathaniel Greene, the old Slater Mill (first cotton mill in America, with a collection of early textile equipment), the old windmill at Jamestown, and a dozen other places where early industry may be studied.

## COMMUNICATIONS

*From* MR. JOHN H. RUCKMAN:

"The article on the frow in July CHRONICLE recalled the one and only time I ever used this tool. Some forty years ago, my father conceived the idea of making a stable floor of wood blocks. He had bolts about six inches long, cut from chestnut logs. An octagonal wooden pattern was placed on the bolt and marked around with pencil, then, with a frow and club, the edges were split off on the mark. Occasionally a block would have to be trimmed a little with a hand axe, as it was important to keep the bottom of the block slightly smaller than the top. The stable floor was dug out and covered with a layer of sand, on which the blocks were placed, filling in or digging out as necessary to keep them even on top. The blocks were ten inches across, with four inch blocks, made in the same way, in the corners. After all were placed, dry sand was swept back and forth over the floor to fill the cracks. This floor is still in place, and I still have the frow!"

*From* MR. ROY VAIL:

"*Re* July issue, page 2, would suggest No. 8 may be a scythe maker's tool. A similar tool is used today in saw factories. Would also suggest No. 5 was used to take a hot scythe from the forge and to hold same on anvil."

*From* "G. A. R. GOYLE"

(Apropos of the description of felt-making, contained in the first instalment of our recent article on hat manufacture.)

"Raw material for making felt is sometimes supplied in bulk by nature in Mongolia. The sheddings of many camels' winter coats are blown about in the desert and the hair gathers, sticks together, gets entangled and, like a huge bolster, rolls on and on, steadily gaining in size. A traveller (A. L. Anderson, "Denigun Buldak" in the *China Journal*, 1933, Vol. XIX, p. 122) in Northwestern Manchuria, near Hailar at the northern edge of the Gobi Desert, relates how he saw a brown bolster, about 12 feet long and three feet in diameter, rolling rapidly toward him. Having read of this phenomenon in the travels of l'Abbé Huc, it was not long before he found the explanation. He further tells how he stopped at a yurt of a Mongol to watch a most primitive method of making felt. Seated on his shaggy pony he 'was dragging by traces what appeared to be a garden roller. This proved to be a log some five feet long and thickly covered with dampened sheep's wool, which, after long bumping at a trot over the uneven ground, would eventually furnish a square of new felt for the side-walls or roof of the yurt.' "

*From* MRS. GRACE ERWIN JENKINS:

"Regarding the cuts of tools shown on page 2 of THE CHRONICLE, Vol. 1, Number 6, for July, 1934, I note you ask for comments, and I would like to say that my father had a tool like No. 5, which he used to hold wagon tires and such pieces of hot iron in removing them from the coals preparatory to welding a broken part. Being far from a blacksmith, it was often necessary to do some work of this kind on the farm, and my father frequently mended farm implements and tools. That is the only use to which I can recall ever seeing my father put the tool you illustrate.

I have often seen him use the frow and its accompanying club for splitting 'shakes' and boards to be used for flooring. He built a cabin in 1892, using the frow to split the floor boards, —which were afterwards dressed by hand, — the roof beams, joists and shakes. A lighter frow was used for the shakes, and they were thinned and smoothed with the draw knife. This cabin was torn down in 1928, and was then in fair condition considering its age."

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H. M. Darby (c), Elkins, W. Va., F. M. Weaver (d), Lansdale, Pa., and Roy Vail (d), Warwick, N Y., wish to have their names added to our list of "Places to Visit."

## "POINTS" OF INTEREST

"Marshall, in his work entitled the Rural Economy of Gloucestershire, mentions a Mr. W. Peacey of Northleach, who, having lost several horses in the staggers, was advised by a friend, whose experience had led him to believe, that he had benefited much by what he recommended — to keep a he-goat in his stables. He got one, and had not for many years another instance of the disorder; but the goat dying, his horses again became afflicted with this alarming disorder. He procured another goat (which is still living) and has not since had an instance of the staggers. He has seldom less than 20 horses in his stables. The influence of the goat is not merely that of a charm; the staggers appear, evidently, to be a nervous disorder. Odors are found in many cases, I believe, to act beneficially on the human nerves; and probably the strong scent of the goat may have a similar effect on those of the horse." Quoted from Humphrey's "Gleanings," Philadelphia 1803.

Flax, in its green state, immediately after the seed had been removed, is said to have been an excellent covering for houses. It was sewed together with a tarred cord, and in a short time exuded a glutinous secretion, which caused the stalks to adhere closely together, forming a solid mass, impervious to the elements.

In provincial English, the word "witch" was used, denoting a paper cone filled with lard and used as a candle.

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